Listing of Claims

1-33. (Cancelled).

34. (Original) A method for enabling vaccination of a patient against infectious diseases, comprising the steps of:

a) treating hookworm infection to a degree sufficient to increase lymphocyte proliferation; and

b) vaccinating said patient against said infectious disease.

35. (Original) The method of claim 34 wherein said infectious disease is selected from the group consisting of HIV, tuberculosis, malaria, measles, tetanus, diphtheria, pertussis, and polio.

36. (Original) A method for enabling hookworm vaccination, comprising the steps of:

a) chemically treating a hookworm infected patient to ameliorate hookworm infection; and

b) vaccinating said patient with a recombinant or synthetic antigen or fragment thereof derived from hookworm after amelioration of hookworm infection.

37-97. (Cancelled)

98. (Previously presented) A composition comprising:

a cocktail of recombinant or synthetic antigens derived from hookworm, and,

a pharmacologically acceptable carrier.

99. (Previously presented) The composition of claim 98, wherein said composition comprises at least one larval stage antigen and at least one adult stage antigen.

100. (Previously presented) The composition of claim 98, wherein said antigen is ASP-1, ASP-2, MTP-1, 103 (SAA), 16, GST or an antigen having at least 80% homology therewith.

101. (Previously presented) The composition of claim 98, wherein said antigen is selected from the group consisting of GST, CP-2, APR-1, APR-2, MEP-1, TMP or an antigen having at least 80% homology therewith.

102. (Previously presented) The composition of claim 98, wherein a species of said hookworm is selected from the group consisting of *Necator americanus*, *Ancylostoma caninum*, *Ancylostoma ceylanicum*, and *Ancyclostoma duodenale*.

103. (Previously presented) A method of vaccinating or eliciting an immune response to hookworm in a mammal, comprising the step of,

administering to said mammal an effective amount of a composition comprising a recombinant or synthetic antigen derived from hookworm, and

a pharmacologically acceptable carrier.

104. (Previously presented) The method of claim 103 wherein said composition includes

a cocktail of recombinant or synthetic antigens derived from hookworm, and,

a pharmacologically acceptable carrier.

105. (Previously presented) The method of claim 103, wherein said composition comprises at least one larval stage antigen and at least one adult stage antigen.

106. (Previously presented) The method of claim 103, wherein said antigen is ASP-1, ASP-2, MTP-1, 103 (SAA), 16, GST, or an antigen having at least 80% homology therewith.

107. (Previously presented) The method of claim 103, wherein said antigen is selected from the group consisting of GST, CP-2, APR-1, APR-2, MEP-1, TMP, or an antigen having at least 80% homology therewith. .

108. (Previously presented) The method of claim 103, wherein a species of said hookworm is selected from the group consisting of *Necator americanus*, *Ancylostoma caninum*, *Ancylostoma ceylanicum*, and *Ancyclostoma duodenale*.

109. (Previously presented) The method of claim 103, further comprising the step of chemically treating a hookworm- infected patient prior to said step of administering.

110. (Previously presented) A method of reducing blood loss in a patient infected with hookworm, comprising the step of

administering to said patient an effective amount of a composition comprising a recombinant or synthetic antigen derived from hookworm, and

a pharmacologically acceptable carrier.

111. (Previously presented) The method of claim 110 wherein said composition includes

a cocktail of recombinant or synthetic antigens derived from hookworm, and,

a pharmacologically acceptable carrier.

112. (Previously presented) The method of claim 110, wherein said composition comprises at least one larval stage antigen and at least one adult stage antigen.

113. (Previously presented) The method of claim 110, wherein said antigen is ASP-1, ASP-2, MTP-1, 103 (SAA), 16, GST, or an antigen having at least 80% homology therewith.

114. (Previously presented) The method of claim 110, wherein said antigen is selected from the group consisting of GST, CP-2, APR-1, APR-2, MEP-1, TMP, or an antigen having at least 80% homology therewith.

115. (Previously presented) The method of claim 110, wherein a species of said hookworm is selected from the group consisting of *Necator americanus*, *Ancylostoma caninum*, *Ancylostoma ceylanicum*, and *Ancyclostoma duodenale*.

116. (Previously presented) The method of claim 110, further comprising the step of chemically treating a hookworm- infected patient prior to said step of administering.

117. (Previously presented) A method of reducing hookworm size, or quantitative egg count or hookworm burden in a patient infected with hookworm, comprising the step of administering to said mammal an effective amount of a composition comprising

a recombinant or synthetic antigen derived from hookworm, and

a pharmacologically acceptable carrier.

118. (Previously presented) The method of claim 117 wherein said composition includes

a cocktail of recombinant or synthetic antigens derived from hookworm, and,

a pharmacologically acceptable carrier.

119. (Previously presented) The method of claim 117, wherein said composition comprises at least one larval stage antigen and at least one adult stage antigen.

120. (Previously presented) The method of claim 117, wherein said antigen is ASP-1, ASP-2, MTP-1, 103, 16, GST, or an antigen having at least 80% homology therewith.

121. (Previously presented) The method of claim 117, wherein said antigen is selected from the group consisting of GST, CP-2, APR-1, APR-2, MEP-1, TMP, or an antigen having at least 80% homology therewith. .

122. (Previously presented) The method of claim 117, wherein a species of said hookworm is selected from the group consisting of *Necator americanus*, *Ancylostoma caninum*, *Ancylostoma ceylanicum*, and *Ancyclostoma duodenale.*

123. (Previously presented) The method of claim 117, further comprising the step of chemically treating a hookworm- infected patient prior to said step of administering.

124. (Previously presented) A method of decreasing L3 migration across skin of a mammal, comprising the step of

administering to said mammal an effective amount of a composition comprising

a recombinant or synthetic antigen derived from hookworm, and

a pharmacologically acceptable carrier.

125. (Previously presented) The method of claim 124 wherein said composition includes

a cocktail of recombinant or synthetic antigens derived from hookworm, and,

a pharmacologically acceptable carrier.

126. (Previously presented) The method of claim 124, wherein said composition comprises at least one larval stage antigen and at least one adult stage antigen.

127. (Previously presented) The method of claim 124, wherein said antigen is ASP-1, ASP-2, MTP-1, 103 (SAA), 16, GST, or an antigen having at least 80% homology therewith.

128. (Previously presented) The method of claim 124, wherein said antigen is selected from the group consisting of GST, CP-2, APR-1, APR-2, MEP-1, TMP, or an antigen having at least 80% homology therewith.

129. (Previously presented) The method of claim 124, wherein a species of said hookworm is selected from the group consisting of *Necator americanus*, *Ancylostoma caninum*, *Ancylostoma ceylanicum*, and *Ancyclostoma duodenale*.

130. (Previously presented) The method of claim 124, further comprising the step of chemically treating a hookworm- infected patient prior to said step of administering.

131. (Previously presented) A nucleotide sequence represented by SEQ ID NO: 76.

132. (Previously presented) An amino acid sequence represented by SEQ ID NO: 77.

133. (New) A composition comprising,
recombinant or synthetic APR-1 antigen,
an adjuvant, and
a pharmacologically acceptable carrier.

134. (New) The composition of claim 98, wherein said composition comprises APR-1 antigen and an adjuvant.

135.(New) The method of claim 103, wherein said recombinant of synthetic antigen is APR-1, and said composition further comprises an adjuvant.

136. (New) The method of claim 110, wherein said recombinant of synthetic antigen is APR-1, and said composition further comprises an adjuvant.

137. (New) The method of claim 117, wherein said recombinant of synthetic antigen is APR-1, and said composition further comprises an adjuvant.